

What is Claimed is:

1. An oxide sintered body essentially consisting of indium oxide and containing titanium, wherein the titanium is contained such that the atomic ratio Ti/In is in the range from 0.003 to 0.120, and wherein the specific resistance is 1 k.cm or less.
2. The oxide sintered body of Claim 1 wherein the specific resistance is  $1 \times 10^{-2}$  .cm or less.
3. The oxide sintered body of Claim 1, wherein the titanium is contained such that the atomic ratio of Ti/In is in the range from 0.003 to 0.019.
4. The oxide sintered body of Claim 3, wherein tin is contained as an impurity in an amount that the atomic ratio of Sn/In is 0.0025 or less.
5. The oxide sintered body of Claim 1, wherein the main phase is only the crystal phase of indium oxide having a bixbyite type structure with titanium contained in solid solution, or the main phase is a mixture of the crystal phase of indium oxide having a bixbyite type structure with titanium contained in solid solution and the crystal phase of an indium titanate compound.
6. The oxide sintered body of Claim 1, produced such that raw

materials of indium oxide powder and titanium oxide powder having an average particle size of 1.μm or less are mixed in a wet mill, formed with a cold isostatic press, and sintered under oxygen-control.

7. The oxide sintered body of Claim 1, wherein no crystal phase of titanium oxide is detected by powder X-ray diffraction measurement.

8. The oxide sintered body of Claim 1, wherein the relative density is 95% or greater.

9. The oxide sintered body of Claim 1, wherein the surface roughness  $R_{max}$  of the surface on the side where sputtering is performed is 3.0 μm or less.

10. A sputtering target, wherein the oxide sintered body of Claim 1 is applied to a metal plate for cooling.

11. A sputtering target according to Claim 10 for use in manufacturing a transparent conductive film having a specific resistance  $1 \times 10^{-3}$  Ω·cm or less.

12. A sputtering target according to Claim 10 for use in manufacturing a low resistant, transparent conductive film having a specific resistance  $5.5 \times 10^{-4}$  Ω·cm or less.

13. A sputtering target according to Claim 10 for use in manufacturing a

transparent conductive film having an average transmittance of infrared rays in the wavelength range from 1000 nm to 1400 nm is at least 60 % for the film itself.

14. A method of manufacturing an oxide transparent electrode film, wherein the sputtering target of Claim 10 is used and a DC sputtering method is used for film forming.